Appendix A

Joint Permit Application

Joint Permit Application (JPA)

AGENCY USE				AGENCY USE
	Previous USACE Permit or File Number	Date Received	Land and Water Management Division, MDEQ File Number	
	USACE File Number		Pre-application Number or Marina Operating Permit Number	
	District Office		Fee received $	

Read Instructions pages i - iii. All of the following boxes below must be checked and information provided for the application to be processed:

- ☑ All items in Sections 1 through 9 are completed
- ☑ Items in Sections 10 through 21 that apply to the project are completed
- ☑ Dimensions, volumes and calculations are provided
- ☑ Reproducible location map, site plan(s), cross sections and photographs are provided, one set must be black and white on 8 ½ by 11 inch paper.
- ☑ List any additional attachments, tables, etc.: See materials provided in this application
- ☑ Date project was staked See application
- ☑ Application fee is attached
- ☑ All requested supplementary attachments (➡) are included

1 PROJECT LOCATION INFORMATION

- Refer to your property's legal description for the Township, Range, and Section information, and your property tax bill for your Property Tax Identification Number(s).

Site Location Address (road, if no street address)	Zip Code	Township Name(s)	Township(s)	Range(s)	Section(s)
4547 County Road 601		Humboldt	T47N	R29W	2, 11

City/Village	County(ies)	Property Tax Identification Number(s)
Humboldt Township	Marquette	52-06-211-001-20

Name of Waterbody	Project Name or Job Number	Subdivision/Plat	Lot Number	Private Claim
HTDF	Humboldt Mill	NA	NA	NA

Project types (check all that apply):
☑ private ☐ public/government ☑ industrial ☐ commercial ☐ multi-family
☐ building addition ☐ new building or structure ☐ building renovation or restoration ☐ river restoration ☐ single-family
☐ project is receiving federal transportation funds ☑ other (explain) Tailings disposal for ore beneficiation process

The proposed project is on, within, or involves: (check all that apply)
☐ a legally established County Drain (date established) (M/D/Y) _____

☐ a stream	☐ a pond (less than 5 acres)	☐ a Great Lake or Section 10 Waters	☐ a natural river	☐ a marina
☐ a river	☐ a channel/canal	☐ a designated high risk erosion area	☐ a dam	☐ a structure removal
☐ a ditch or drain	☑ an inland lake (5 acres or more)	☐ a designated critical dune area	☐ a wetland	☐ a utility crossing
☐ a floodway area	☐ a 100-year floodplain	☐ a designated environmental area	☐ within 500 feet of an existing water body	

2 DESCRIBE PROPOSED PROJECT AND ASSOCIATED ACTIVITIES, AND THE CONSTRUCTION SEQUENCE AND METHODS (attach additional sheets)

Written Summary of All Proposed Activities The proposed project is the refurbishment of the Humboldt Mill to process ore to concentrates. The HTDF will be recommissioned to accept tailings from the mill operations. Further description of associated activities and construction sequence and methods appear in Section 2.2 of this application.

Construction Sequence and Methods See Section 2.2 of this application.

3 APPLICANT, AGENT/CONTRACTOR, AND PROPERTY OWNER(s) INFORMATION

Owner/Applicant (individual or corporate name)	Agent/Contractor (firm name and contact person)
Jonathan C. Cherry Kennecott Eagle Minerals Co.	
Mailing Address 504 Spruce Street	Address
City Ishpeming State MI Zip Code 49849	City State Zip Code
Daytime Phone Number with Area Code 906-486-1257 Cell Phone Number	Daytime Phone Number with Area Code Cell Phone Number
Fax 906-486-1053 E-mail jcherry@kennecott.com	Fax E-mail

AUTHORIZATIONS

☑ No ☐ Yes Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project?

➡ If no, attach letter(s) of authorization from all owners. A letter signed by each property owner authorizing the agent/contractor/other owner to act on his or her behalf or a copy of easements or right-of-ways must be provided. If multiple property owners, also attach a list of all owners along with their names, mailing addresses, and telephone numbers. If the applicant is a corporation, a corporate officer must provide written document authorizing any agent/contractor listed above to act on its behalf. A letter of authorization must be provided from an owner receiving dredge spoils on their property, or where access through their property is required.

Property Owner's Name (if different from applicant)	Daytime Phone Number with Area Code	Cell Phone Number
Kennecott purchase option		
Mailing Address	City	State Zip Code
See Section 2.3		

☑ No ☐ Yes Is there a MDEQ conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property in the project area?

➡ If yes, attach a copy.

US Army Corps of Engineers (USACE) Michigan Department of Environmental Quality (MDEQ) DEQ

4 PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

Purpose/Intended Use: The purpose must include any new development or expansion of an existing land use.

The refurbishment of the Humboldt Mill and recommissioning of the Humboldt tailings disposal facility for tailings placement.
The refurbishment does not include expansion. See Section 2.4 for details.

Alternatives: Include a description of alternatives considered to avoid or minimize natural resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; and alternative locations. For utility crossings, include both alternative routes and alternative construction.

Dry storage and paste backfill alternatives were considered for tailings disposal. See Section 2.4 of this application.

5 LOCATING YOUR PROJECT SITE

Attach a copy of a map that clearly shows the site location and road from the nearest major intersection, and includes a north arrow. Figures 1-1 and 1-2

Is there an access road to the project? ☐ No ☑ Yes (If Yes, type of road, check all that apply) ☑ private ☑ public ☐ improved ☐ unimproved

Name of roads at closest main intersection North end: US 41 and FX, public/private and South end: CR 601 and Hwy 95, public/private

Directions from main intersection From Hwy 41 and 95, travel south 0.7 miles on Hwy 95 to CR 601. Turn east, travel 0.8 miles to mill entrance

Style of house or other building on site ☐ ranch ☐ 2-story ☐ cape cod ☐ bi-level ☐ cottage/cabin ☐ pole barn ☐ none ☑ other (describe) Industrial

Color _____ Color of adjacent property house and/or buildings _____ House number 4547 Street name CR 601

Fire lane number _____ Lot number _____ Address is visible on ☐ house ☐ garage ☐ mailbox ☐ sign ☑ other (describe) See Figure 1-2

How can your site be identified if there is no visible address? KEMC will post entrance sign

Provide directions to the activity site, with distances from the best and nearest visible landmark and waterbody. From US 41, travel south 0.7 miles south on Hwy 95. Turn east on CR 601. Travel 0.8 miles to mill entrance. HTDF north of mill facility.

Does the project cross the boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.)
☑ No ☐ Yes ➪ If Yes, list jurisdictions:

6 List all other federal, interstate, state, or local agency authorizations required for the proposed activity, including all approvals or denials received.

Agency	Type of approval	Identification number	Date applied	Date approved / denied	If denied, reason for denial
MCCD	Part 91		Nov. 2008		
MDEQ	Part 21/Part 632		Nov. 2008		

See Sections 1.4 of this application

7 COMPLIANCE

If a permit is issued, date activity will commence (M/D/Y) June, 2009

Proposed completion date (M/D/Y) 2019

Has any construction activity commenced or been completed in a regulated area? ☑ No ☐ Yes
➪ If Yes, identify the portion(s) underway or completed on a separate set of drawings or attach project specifications and give completion date(s) (M/D/Y)

Were the regulated activities conducted under a MDEQ permit? ☐ No ☐ Yes
If Yes, list the MDEQ permit number: Not applicable

Are you aware of any unresolved violations of environmental law or litigation involving the property? ☑ No ☐ Yes (If Yes, explain below.)

8 ADJACENT/RIPARIAN AND IMPACTED OWNERS (Attach additional sheets if necessary)

- Complete information for all adjacent and all impacted property owners and the lake association or established lake board, including the contact person's name.
- If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.

Property Owner's Name	Mailing Address	City	State	Zip Code
See Section 2.8 of this application				

Name of ☐ Established Lake Board ☐ or Lake Association
and the Contact Person's name, phone number, and mailing address NA

9 APPLICANT'S CERTIFICATION READ CAREFULLY BEFORE SIGNING

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

	Printed Name	Signature	Date (M/D/Y)
☐ Property Owner ☐ Agent/Contractor ☑ Corporation/Public Agency – Title	Jonathan C. Cherry Kennecott Eagle Minerals Co.		12-15-08

10 PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND, LAKE OR STREAM OR A GREAT LAKE

- Check boxes A through M that may be applicable to your project and provide all the requested information.
- If your project may affect wetlands, also complete Section 12. If your project may impact regulated floodplains, also complete Section 13.
- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27.
- Some projects on the Great Lakes require an application for conveyance prior to Joint Permit Application completeness.

➡Provide a cross section and overall site plan showing existing lakes, streams, wetlands, and other water features; existing structures; and the location of all proposed structures, land change activities and soil erosion and sedimentation control measures. Review Appendix B and EZ Guides to prepare site-specific drawings.
➡Provide tables for multiple impact areas or multiple activities and provide fill and excavation/dredge calculations.

Water Level Elevation
On a Great Lake use IGLD 85 ☐ surveyed ☐ converted from observed still water elevation. On inland waters, ☐ NGVD 29 ☑ NAVD 88 ☐ other _____
Observed water elevation (ft) 1537.88 date of observation (M/D/Y) June 5, 2007

☑ **A. PROJECTS REQUIRING FILL** (See All Sample Drawings)
➡ Attach both overall site plan and cross-section views to scale showing maximum and average fill dimensions. Figs. 1-3, 2-1, 2-3, and 2-4

(Check all that apply) ☐ floodplain fill ☐ wetland fill ☐ riprap ☐ seawall, bulkhead, or revetment ☐ bridge or culvert
☐ boat launch ☐ off-shore swim area ☐ beach sanding ☐ boatwell ☐ crib dock ☑ other inland lake fill

Fill dimensions (ft) See Section 2.10 and Figures 2-1, 2-3 and 2-4	Total fill volume (cu yd)	Maximum water depth in fill area (ft)
length width maximum depth	2.4 x E06 cy	190

Type of clean fill ☐ pea stone ☐ sand ☐ gravel ☐ wood chips ☑ other tailings from ore beneficiation
Will filter fabric be used under proposed fill? ☑ No ☐ Yes (If Yes, type) _____

Source of clean fill ☐ on-site ➡ If on-site, show location on site plan ☐ commercial ☑ other ➡If other, attach description of location See section 2.10 of this application

Fill will extend _____ feet into the water from the shoreline and upland 0 feet out of the water. Fill volume below OHWM (cu yd) 2.4 x E06 cy

☐ **B. PROJECTS REQUIRING DREDGING OR EXCAVATION** (For dredging projects see Sample Drawing 7, for excavation see other applicable Sample Drawings)
➡ Attach both plan and cross-section views to scale showing maximum and average dredge and/or excavation dimensions, and dredge disposal location.

(Check all that apply) ☐ floodplain excavation ☐ wetland dredge, excavation or draining ☐ seawall, bulkhead, or revetment
☐ navigation ☐ boat well ☐ boat launch ☐ other _____

Total dredge/excavation volume (cu yd)	Dimensions length width depth	Dredge/excavation volume below OHWM (cu yd)	Method and equipment for dredging

Has proposed dredge material been tested for contaminants? ☐ No ☐ Yes
➡ If Yes, provide Test Results with a map of sampling locations
Dredged or excavated spoils will be placed ☐ on-site ☐ off-site
➡ Provide detailed disposal area site plan and location map.
➡ Provide Letter of authorization from owner, if disposing of spoils off site.

Has this same area previously been dredged? ☐ No ☐ Yes If Yes, date and permit number: _____
If Yes, are you proposing to enlarge the previously dredged area? ☐ No ☐ Yes

Is long-term maintenance dredging planned? ☐ No ☐ Yes If Yes, when and how much? _____

☑ **C. PROJECTS REQUIRING RIPRAP** (See Sample Drawings 2, 3, 8, 12, 14, 17, 22, and 23. Others may apply)

	Dimensions (ft) length width depth	Volume(cu yd)
Riprap waterward of the ☐ shoreline OR ☐ ordinary high water mark		
Riprap landward of the ☑ shoreline OR ☐ ordinary high water mark	length 10 width 25 depth 1.5	8.33

Type of riprap ☐ field stone ☑ angular rock ☐ other _____
Will filter fabric be used under proposed riprap? ☐ No ☑ Yes If Yes, type geotextile fabric

☐ **D. SHORE PROTECTION PROJECTS** (See Sample Drawings 2, 3, and 17) Complete Sections 10 A, B and/or C above, as applicable

(check all that apply) ☐ riprap/revetment – length (ft) _____ ☐ seawall/bulkhead – length (ft) _____ ☐ other – length (ft) _____
Distances of project from both property lines (ft) _____

☐ **E. DOCK - PIER – MOORING PILINGS – ROOFS** (See Sample Drawing 10)

Dock Type ☐ open pile ☐ filled ☐ crib
Seasonal support structure? ☐ No ☐ Yes
Permanent Roof ☐ No ☐ Yes Mounted on _____
Maximum Dimensions: length width height

Proposed structure dimensions (ft) length width
Dimensions of nearest adjacent structures (ft) length width

☐ **F. BOAT WELL** (See EZ Guides)

Type of sidewall stabilization ☐ wood ☐ steel ☐ concrete ☐ vinyl ☐ riprap ☐ other _____

Boat well dimensions (ft) Length width depth
Number of boats
Volume of backfill behind sidewall stabilization (cu yd)
Distances of boat well from adjacent property lines (ft)

☐ **G. BOAT LAUNCH** (See EZ Guide) (check all that apply) ☐ new ☐ existing ☐ public ☐ private ☐ commercial ☐ replacement

Proposed overall boat launch dimensions (ft) length width depth
Type of material ☐ concrete ☐ wood ☐ stone ☐ other _____
Existing overall boat launch dimensions (ft) Length width depth
Boat launch dimensions (ft) below ordinary high water mark Length width depth
Distances of launch from both property lines (ft)
Number of adjacent Skid piers
Skid pier dimensions (ft) length width

☐ **H. BOAT HOIST** (See EZ Guide)

(Check all that apply) ☐ seasonal ☐ permanent ☐ cradle ☐ side lifter ☐ other _____ located on ☐ seawall ☐ dock ☐ bottomlands

☐ **I. BOARDWALKS AND DECKS IN** ☐ WETLANDS - OR - ☐ FLOODPLAINS (See Sample Drawings 5 and 6) Provide table if necessary

Boardwalk ☐ on pilings ☐ on fill Dimensions (ft) length width
Deck ☐ on pilings ☐ on fill Dimensions (ft) length width

10 Continued - PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND LAKE OR STREAM OR A GREAT LAKE

☑ J. INTAKE PIPES (See Sample Drawing 16) ☑ OUTLET PIPES (See Sample Drawing 22) See Figures 2-5 and 2-6

Type ☐ headwall ☐ end section ☐ pipe ☑ other screened intake structure

If outlet pipe, discharge is to ☑ wetland ☐ inland lake ☐ stream, drain, or river ☐ Great Lake ☐ other

Dimensions of headwall OR end section (ft) length NA width depth

Number of pipes 4

Pipe diameters and invert elevations See Section 2.10

☐ K. MOORING AND NAVIGATION BUOYS (See EZ Guide for Sample Drawing)

➡ Provide an overall site plan showing the distances between each buoy, distances from the shore to each buoy, and depth of water at each buoy in feet.

➡ Provide cross-section drawing(s) showing anchoring system(s) and dimensions.

Number of buoys | Boat Lengths | Type of anchor system | Purpose of buoy ☐ mooring ☐ navigation ☐ swimming

Dimensions of buoys (ft) Width height swing radius chain length

Do you own the property along the shoreline? ☐ No ☐ Yes

➡ Attach Authorization Letter from the property owner(s), if No above.

☐ L. FENCES IN WETLANDS, STREAMS, OR FLOODPLAINS (See EZ Guide for Drawing)

➡ Provide an overall site plan showing the proposed fencing through wetlands, streams, or floodplains.

➡ Provide drawing of fence profile showing the design, dimension, post spacing, board spacing, and distance from ground to bottom of fence.

(check all that apply) ☐ wetlands ☐ streams ☐ floodplains

Total length (ft) of fence through wetlands ____ streams ____ floodplains ____

Fence height (ft) ____

Fence type and material

☑ M. OTHER - e.g., structure removal or construction, breakwater, aerator, fish shelter, and structural foundations in wetlands or floodplains. See Section 2.10

Structure Description: Subsurface cut-off wall on north end of HTDF

Dimensions: 1800 feet long, 40-50 feet deep

11 EXPANSION OF AN EXISTING OR CONSTRUCTION OF A NEW LAKE OR POND (See Sample Drawings 4 and 15)

Which best describes your proposed waterbody use (check all that apply)

☐ wildlife ☐ stormwater basin ☐ recreation ☐ wastewater basin ☐ other

Water source for lake/pond

☐ groundwater ☐ natural springs ☐ Inland Lake or Stream ☐ stormwater runoff ☐ pump ☐ sewage ☐ other

Location of the lake/basin/pond ☐ floodplain ☐ wetland ☐ upland

Maximum dimensions (ft): length width depth

Maximum Area : ☐ acres ☐ sq ft

Spoils will be placed ☐ onsite ☐ offsite outside of wetland and floodplain ☐ other

➡ Provide a Detailed Disposal Area Site Plan with location map, address, and disposal dimensions.

➡ Provide a Letter of Authorization from off site disposal site owner.

➡ Provide elevations and cross sections for outlets and/or emergency. Complete section 10J

Will project involve construction of a dam, dike, outlet control structure or spillway? ☐ No ☐ Yes (If Yes, complete Section 17) Basin has overflow. See Section 2.11

12 ACTIVITIES THAT MAY IMPACT WETLANDS (See Sample Drawings 8 & 9, and complete sections 10 A and 10 B for dredge or excavation as applicable)

- For information on the MDEQ's Wetland Identification Program (WIP) visit www.michigan.gov/deqwetlands or call 517-373-1170.
- Complete the wetland dredge and wetland fill dimension information below for each impacted wetland area. ➡ Attach tables for multiple impact areas or activities
- Label the impacted wetland areas on a site plan, drawn to scale or with dimensions. ➡ Attach at least one cross-section for each wetland dredge and/or fill area.
- If dredge/excavation material will be disposed of on site, show the location on site plan and include soil erosion and sedimentation control measures.

(check all that apply) ☐ fill (Section 10A) ☐ dredge or excavation (Section 10B) ☐ boardwalk or deck (Section 10I) ☐ dewatering ☐ fences (Section 10L) ☐ bridges and culverts (Section 14) ☐ draining surface water ☐ stormwater discharge ☐ restoration ☐ other

Wetland dredge/excavation dimensions	maximum length (ft)	maximum width (ft)	Dredge/excavation area ☐ acres ☐ sq ft	average depth (ft)	dredge volume (cu yd)
Wetland fill dimensions	maximum length (ft)	maximum width (ft)	Fill area ☐ acres ☐ sq ft	average depth (ft)	fill volume (cu yd)

Total wetland dredge/excavation area ☐ acres ☐ sq ft	Total wetland dredge/excavation volume (cu yd)	Total wetland fill area ☐ acres ☐ sq ft	Total wetland fill volume (cu yd)

The proposed project will be serviced by: ☐ public sewer ☐ private septic system ➡ Show system on plans

If septic system, has an application for a permit been made to the County Health Department? ☐ No ☐ Yes

If Yes, has permit been issued? ☐ No ☐ Yes ➡ Provide copy

Has a professional wetland delineation been conducted for this parcel? ☐ No ☑ Yes

➡ Provide a copy of the delineation. App C ➡ Supply data sheets. See Section 2.12

Applicant purchased property ☐ before OR ☑ after October 1, 1980.

Is there a recorded MDEQ easement on the property? ☑ No ☐ Yes If Yes, provide the easement number

Has the MDEQ conducted a wetland assessment for this parcel? ☑ No ☐ Yes ➡ If Yes, provide a copy of assessment or WIP number:

Describe the wetland impacts, the proposed use or development, and any alternatives considered.

Water will be displaced from the HTDF due to tailings placement. The water supply to the wetland may increase. See Section 2.12 and Section 3

Does the project impact more than 1/3 acre of wetland? ☐ No ☐ Yes NA

➡ If yes, submit a Mitigation Plan that includes the type and amount of mitigation proposed. For more information on mitigation go to www.michigan.gov/deqwetlands

Describe how impacts to waters of the United States will be avoided and minimized.

A WWTP will be used so that discharged water to Wetland EE will meet Michigan Water Quality Standards. WWTP discharge is permitted under a separate NPDES permit for the project.

Describe how impact to waters of the United States will be compensated. OR Explain why compensatory mitigation should not be required for the proposed impacts.

Proposed project does not require mitigation or compensation, since water quality in receving wetland will be protected and since there is no filling of a wetland. See Section 2.12.

Is any grading or mechanized land clearing proposed? ☐ No ☑ Yes

➡ Show locations on submitted site plan. See Section 2.12

Has any of the proposed grading or mechanized land clearing been completed? ☑ No ☐ Yes

➡ Show labeled locations on site plan

13 FLOODPLAIN ACTIVITIES (See Sample Drawing 5. Others may apply.) For more information go to www.michigan.gov/deqfloodplainmanagement

- Complete Sections 10 A and 10 B and other Sections, as applicable.
- A hydraulic analysis or hydrologic analysis may be required to fully assess floodplain impacts. ➡ Attach hydraulic calculations.

➡ Attach additional sheets or tables with the requested information when multiple floodplain activities are included in this application. NA

(check all that apply) ☐ fill ☐ excavation ☐ other _____

Site is _____ feet above ☐ ordinary high water mark (OHWM) OR ☐ observed water level. Date of observation (M/D/Y) _____

Fill volume below the 100-year floodplain elevation (cu yd)	Compensating cut volume below the 100-year floodplain elevation (cu yd)

14 BRIDGES AND CULVERTS (Including Foot and Cart Bridges) (See Sample Drawings 5, 14A, 14B, 14C, 14D, and EZ Guides)

- Provide detailed site-specific drawings of existing and proposed Plan and Elevation View, (Sample Drawing 14A), Elevation View (Sample Drawing 14B), Stream and Floodplain Cross-Section (Sample Drawing 14C), Stream Profile (Sample Drawing 14D) and Floodplain Fill (Sample Drawing 5) at a scale adequate for detailed review.
- Provide the requested information that applies to your project. If there is not an existing structure, leave the "Existing" column blank.
- If you choose to have a Licensed Professional Engineer "certify" that your project will not cause a "harmful interference" for a range of flood discharges up to and including the 100-year flood discharge, then you must use the "Required Certification Language." You may request a copy by phone, email, or mail. A hydraulic report supporting this certification may also be required. Is Certification Language attached? ☐ No ☐ Yes

➡ Attach additional sheets and table with the requested information for multiple crossings. Include hydraulic calculations. NA

		Existing	Proposed			Existing	Proposed
Culvert type (box, circular, arch) and material (corrugated metal, timber, concrete, etc.)				Bridge span (length perpendicular to stream) OR culvert ☐ width ☐ diameter (ft)			
Bridge type (concrete box beam, timber, concrete I-beam, etc.)				Bridge width (parallel to stream) OR culvert length (ft)			
Entrance design (projecting, mitered, wingwalls, etc.)				Bridge rise (from bottom of beam to streambed) OR Culvert rise (fill from top of culvert to streambed) (ft)			
Total structure waterway opening above streambed (sq ft)				Approach slope fill from existing grade to culvert or bridge			
☐ elevation of culvert crown	Upstream			Higher elevation of ☐ culvert invert	Upstream		
☐ bottom of bridge beam (ft)	Downstream			OR ☐ streambed within culvert (ft)	Downstream		
Elevation of road grade at structure (ft)				Distance from low point of road to mid-point of bridge crossing (ft)			
Elevation of low point in road (ft)							

Cross-sectional area of primary channel (sq ft) (See Sample Drawing 14C)	Average stream width at OHWM outside the influence of the structure (ft)	Upstream _____ Downstream _____

Reference datum used (show on plans with description) ☐ NGVD 29 ☐ NAVD 88 ☐ IGLD 85 (Great Lakes Coastal Areas) ☐ other _____

High water elevation – describe reference point and highest known water level above or below reference point and date of observation. _____

15 STREAM, RIVER, OR DRAIN CONSTRUCTION ACTIVITIES (No sample drawing available)

- Complete Section 10A for fill, Section 10B for dredge or excavation, and Section10C for riprap activities.
- If side casting or other proposed activities will impact wetlands or floodplains, complete Sections 12 and 13, respectively. NA

➡ Provide an overall site plan showing existing lakes, streams, wetlands, and other water features; existing structures; and the location of all proposed structures and land change activities.

➡ Provide cross-section (elevation) drawings necessary to clearly show existing and proposed conditions. Be sure to indicate drawing scales.

➡ For activities on legally established county drains, provide original design and proposed dimensions and elevations.

(check all that apply) ☐ maintenance ☐ improvement ☐ relocation ☐ enclosure ☐ new drain ☐ wetlands ☐ other _____

Dimensions (ft) of existing stream/drain channel to be worked on length width depth

Dimensions (ft) of new, relocated, or enclosed stream/drain channel length width depth	Volume of dredge/ excavation (cu yds)
Existing channel average water depth in a normal year (ft)	Proposed side slopes (vertical / horizontal)

How will slopes and bottom be stabilized?

Will old/enclosed stream channel be backfilled to top of bank grade? ☐ No ☐ Yes	Length of channel to be abandoned (ft)	Volume of fill (cu yds)

If an enclosed structure is proposed, check type ☐ concrete ☐ corrugated metal ☐ plastic ☐ other _____
Dimensions of the structure diameter length volume of fill

Will spoils be disposed of on site? ☐ No ☐ Yes ➡ Show location of spoils on site plan if spoils disposed on an upland area.

Water elevation _____. Reference datum used ☐ NGVD 29 ☐ NAVD 88 ☐ IGLD 85 (Great Lakes Coastal Areas) ☐ other _____
➡ Show elevation on plans with description.

16 DRAWDOWN OF AN IMPOUNDMENT

- If wetlands will be impacted, also complete Section 12.

No drawdown of the HTDF will occur

Type of drawdown ☐ over winter ☐ temporary ☐ one-time event ☐ annual event ☐ permanent (dam removal) ☑ other displacement

Reason for drawdown HTDF water will be displaced upon addition of tailings slurry

Has there been a previous drawdown? ☑ No ☐ Yes (If Yes, provide date (M/D/Y))

Previous MDEQ permit number, if known

Does waterbody have established legal lake level? ☑ No ☐ Yes ☐ Not Sure

Dam ID Number, if known

Extent of vertical drawdown (ft) 0	Impoundment design head (ft) NA	Number of adjacent or impacted property owners 0
Date drawdown would start (M/D/Y)	Date drawdown would stop (M/D/Y)	Rate of drawdown (ft/day) 0
Date refilling would start (M/D/Y)	Date refilling would end (M/D/Y)	Rate of refill (ft/day) 0
Type of outlet discharge structure to be used ☐ surface ☑ bottom ☐ mid-depth	Impoundment area at Normal water level (acres) 67	Sediment depth behind impoundment discharge structure (ft)

17 DAM, EMBANKMENT, DIKE, SPILLWAY, OR CONTROL STRUCTURE ACTIVITIES (See Sample Drawing 15)

- For more information go to www.michigan.gov/deqdamsafety
- If wetlands will be impacted, also complete Section 12.
- ➡Attach site-specific conceptual plans for construction of a new dam, reconstruction of a failed dam, or enlargement of an existing dam for resource impact review.
- Detailed engineering plans are required once the activity has been determined to be permitable from an environmental standpoint.
- ➡Attach detailed engineering plans for a dam repair, dam alteration, dam abandonment, or dam removal.

Which one best describes your project? ☐ new dam construction ☐ reconstruction of a failed dam ☐ enlargement of an existing dam ☐ dam repair ☐ dam alteration ☐ dam abandonment ☐ dam removal ☑ other Subsurface cut-off wall

Dam ID Number If known NA	Type of outlet discharge structure ☐ surface ☐ bottom ☐ mid depth	Will proposed activities require a drawdown of the waterbody to complete the work? ☑ No ☐ Yes (If Yes, also complete Section 16)	
Riprap Volume (cu yd) 0	Dredging/excavation Volume (cu yd) 0	Fill volume (cu yd)	Does structure allow complete drainage of waterbody? ☑ No ☐ Yes
Benchmark elevation (ft)	Datum used ☐ Local ☐ NGVD 29 ☑ other NAD 83/96	Describe benchmark and show on plans	

Have you engaged the services of a Licensed Professional Engineer? ☐ No ☑ Yes If Yes, provide name, registration number, and mailing address:
Name: John O. Starke, P.E. Registration Number 6201052283 Mailing Address Foth Infrastructure & Environment, LLC 2737 S Ridge Rd, Ste 600, Green Bay, WI 54307

Will a water diversion during construction be required? ☑ No ☐ Yes
If Yes, describe how the stream flow will be controlled through the dam construction area during the proposed project activities:

COMPLETE THE FOLLOWING FOR A NEW DAM, RECONSTRUCTION OF A FAILED DAM, OR ENLARGEMENT OF AN EXISTING DAM:

Describe the type of dam and how you will design the dam and embankment to control seepage through and underneath the dam. NA

Embankment top elevation (ft)	Streambed elevation at downstream embankment toe (ft)	Structural height (difference between embankment top elevation and streambed elevation at downstream embankment toe) (ft)	
Embankment length (ft)	Embankment top width (ft)	Embankment bottom width (ft)	Embankment slopes (vertical / horizontal) Upstream ____ Downstream ____
Proposed normal pool elevation (ft)	Impoundment flood elevation (ft)	Maximum vertical drawdown capability (ft) (Attach operational procedure of the proposed structure, if available)	
Have soil borings been taken at dam location? ☐ No ☐ Yes ➡ If yes, attach results.	Will a cold water underspill be provided? ☐ No ☐ Yes If Yes, invert elevation (ft) ____	Do you have flowage rights to all proposed flooded property at the design flood elevation? ☐ No ☐ Yes	

18 UTILITY CROSSINGS (See Sample Drawings 12 and 13, and EZ Guide) NA

- If side casting is required, complete Sections 10A and 10B. If spoils will be placed in wetlands or wetlands may be impacted, complete Section 12.
- ➡Attach additional sheets or tables with the requested information as needed for multiple crossings.

What method will be used to construct the crossings? ☐ flume ☐ plow ☐ open trench ☐ jack and bore ☐ directional drilling

Crossing of ☐ Inland Lake or Stream ☐ floodplain ☐ international waters ☐ wetlands (also complete Section 12)

Type	Number of wetland crossings	Number of inland lake or stream crossings	Pipe diameter (in)	Pipe length per crossing (ft)	Distance below streambed or wetland (in)	Trench width (ft)
☐ sanitary sewer						
☐ storm sewer						
☐ watermain						
☐ cable						
☐ oil/gas pipeline						

19 MARINA CONSTRUCTION AND OPERATING PERMIT INFORMATION (See Sample Drawing 21) NA

- For more information go to www.michigan.gov/deqmarinas
- Marinas located on the Great Lakes, including Lake St. Clair, may be required to secure leases or conveyances from the state of Michigan to place structures on the bottomlands. If a conveyance is necessary, an application must be submitted before the Joint Permit Application can be determined complete.

➡ Enclose a copy on any current pump-out agreement with another marina facility.

➡ Attach a copy of the property legal description or a property boundary survey report to your application.

Marina owner			Marina name		
Mailing address			Location street address		
City	State	Zip Code	City	State	Zip Code
Marina owner's daytime telephone number with area code			Marina's daytime telephone number with area code		

Check the reasons for submitting this application
- ☐ Owner's name change/transfer
- ☐ Construction of a new marina
- ☐ Issuance of a new Marina Operating Permit
- ☐ Expansion/modification of an existing marina
- ☐ Renewal of a Marina Operating Permit

Current Marina Operating Permit Number _____ Expiration Date (M/D/Y) _____

	Existing Total	Revised Total		Existing Total	Revised Total
Number of boat slips/wells (do not include broadside)			Are sanitary pump-out facilities available?	☐ No ☐ Yes	☐ No ☐ Yes
Linear feet of broadside dockage			Number of launch ramps/lanes		
Number of mooring buoys			Maximum number of boats at broadside		

20 HIGH RISK EROSION AND CRITICAL DUNE AREAS (See Sample Drawings 19 and 20, also Sample Drawing 9 if wetlands are impacted) NA

- For more information go to www.michigan.gov/deqsanddunes
- Construction in critical dune areas on slopes greater than a 1-foot vertical rise in a 3-foot horizontal plane (33 percent) is prohibited without a special exception.
- Construction in critical dune areas on slopes that measure from a 1-foot vertical rise in a 4-foot horizontal plane (25 percent) to less than a 1-foot vertical rise in a 3-foot horizontal plane (33 percent) requires plans prepared by a registered architect or licensed professional engineer.
- All property boundaries and proposed structure corners, septic system, water well, and driveway locations must be staked before the MDEQ site inspection.
- Scaled overhead and cross-section plans that include all property boundaries, and the location and dimensions of all structures and terrain alterations must be included.
- Additional information, including the building construction plans, may be required to complete the application review.

➡ Construction in critical dune areas requires inclusion of the following written assurances:
1) permit or letter from county enforcing agent stating project complies with Part 91 (Soil Erosion and Sedimentation Control),
2) permit or letter from County Health Department for work on a septic system, and
3) letter from applicant stating any proposed tree or vegetation removal complies with instructions of the local Soil Conservation District.

Parcel dimensions (ft) width depth	Property is a ☐ platted lot ☐ unplatted parcel	Year current property boundaries created	Date project staked (M/D/Y)

Type of construction activities ☐ home ☐ garage ☐ driveway ☐ septic ☐ addition ☐ renovation ☐ other _____

The proposed project will be serviced by ☐ public sewer ☐ private septic system ➡ If septic system, show septic system on plans	If septic system, has application been made to the County Health Department for a permit? ☐ No ☐ Yes If Yes, has permit been issued? ☐ No ☐ Yes	If Yes, critical dune projects require County Health Department approval submitted with application. ➡ Attach Written Assurance(s)	Number of individual living units in proposed building

Existing construction is on ☐ pilings ☐ basement ☐ concrete slab ☐ crawl space	Proposed new construction will be on ☐ pilings ☐ basement ☐ concrete slab ☐ crawl space
Existing construction material above foundation wall ☐ stud frame ☐ log ☐ block ☐ other _____	Proposed new construction material above foundation wall ☐ stud frame ☐ log ☐ block ☐ other _____
Existing siding material ☐ wood ☐ vinyl ☐ block ☐ other _____	Proposed new siding material ☐ wood ☐ vinyl ☐ block ☐ other _____
Area of the existing foundation, excluding attached garage (sq ft)	Area of the proposed foundation, excluding attached garage (sq ft)
Area of the existing garage foundation (sq ft)	Area of the proposed garage foundation (sq ft)

If renovating or restoring existing structure, renovation or restoration cost	Current structure replacement value	Tax assessed value of existing structure excluding land value)	Assessment Year
$ _____	$ _____	$ _____	_____

21 ACTIVITIES IN DESIGNATED ENVIRONMENTAL AREAS (No Sample Drawings Available) NA

- Many designated environmental areas are completely or partially in wetlands. Be sure to complete Section 12 if your proposed activities will also occur in wetlands.

➡ Attach a detailed site plan for any alteration in a designated environmental area.

(Check all that apply) ☐ placement of structures ☐ alteration of vegetation ☐ grading or other soil alteration ☐ other _____ ☐ alteration of natural drainage